ABSTRACT

A method for allocating a set of time slots belonging to a common time division multiple access (TDMA) channel to a network of transceiver nodes is provided. The method includes the steps of dividing the set of time slots into a plurality of time slot sub-sets; defining for each transceiver node a common function that assigns one time slot sub-set of the plurality of time slot sub-sets to each point in space, where each point in space is identified by a unique set of space coordinates; and performing the following steps for each one of the transceiver nodes: periodically identifying a set of space coordinates; and allocating to each transceiver node time slots belonging to the time slot sub-set assigned by the common function to the point in space identified by the periodically identified set of space coordinates. The method further includes the step of resolving time slot allocation conflicts occurring when at least two transceiver nodes are allocated time slots belonging to an identical time slot sub-set and the distance between the at least two transceiver nodes is less than a predetermined distance threshold. This step includes allocating to each one of the at least two transceiver nodes time slots belonging to a different time slot sub-set of the identical time slot sub-set. The periodically identified set of space coordinates corresponds to the current set of space coordinates for each one of the transceiver nodes.